

REMARKS

Claims 1-13 are pending in the application.

Response to Claim Objections:

The Examiner objects to claims 2-8 because of certain informalities. In response to the Examiner's suggestions, the applicants have modifying these claims as follows:

- a. Dependent claims 2-7 have been amended to start with "The system" as they refer to "A device driver system" of independent claim 1; and
- b. The grammatical error at claim 8, line 12 has been corrected to say "card is a USB card";

Claim Rejections:

The Examiner rejects claims 1-13 under 35 U.S.C. 101 as non-statutory subject matter indicating that independent claims 1, 8, 9 recite a device driver system, driver means and supplemental device driver are "functional descriptive material" unless recorded on some computer-readable medium. In response to this objection, applicants have modified claims 1, 8, and 9 to describe the device driver system, driver means and supplemental device driver as being recorded on computer-readable medium as is consistent with the disclosure.

The Examiner rejects claims 1-13 under 35 U.S.C. 102(e) as being anticipated by Tang (US 6,298,370). In response to these rejections, applicants assert that the claims, as amended, recite structure that physically distinguishes over the reference under section 102(e) as follows:

The present invention shows a system with an interposed additional driver means which doesn't interfere with the operability of the preexisting driver.

One non-limiting advantage provided by this feature of the present invention is that it can permit the usage of hardware devices which are not catered for by the operating system, without adversely affecting the functionality of hardware devices

originally supported by the operating system. Further advantages can be seen from inspection of the non-limiting implementation illustrated in Figure 2.

Figure 2 of the specification shows a new (additional) driver interposed between the operating system and a WDM driver and replicating the interface at its interfaces with both. It performs the following three functions: 1) responding to the IRP's from the operating system offering all required functionality; 2) performing all necessary processing of the data in order to provide the required functionality; and 3) communicating with the preinstalled driver using the same IRP structures that the operating system would normally use. In other words, the additional driver sits between the operating system and the preinstalled device driver. And it provides operability of the new (previously unsupported) hardware device without affecting the signals moving between the operating system and the preinstalled device driver.

The new (additional) driver communicates directly with the operating system. The original manufacturer's device driver communicates with the new driver (i.e. communications are filtered through the new driver) in a manner which is indistinguishable from direct communication with the operating system, therefore allowing normal functionality of the preexisting device driver. Thus, the system can drive hardware ranging from an original hardware device (supported by the installed device driver) to a new and previously unsupported device such as a 3D sound system.

The prior art does not teach or suggest all of the features of independent claims 1, 8, and 9, for at least the reason that Tang fails to teach or suggest additional driver means interposed between the operating system and the said installed driver as required by claim 1.

The cited prior art, Tang, refers generally to a dynamically balanced system that reallocates the collective computational resources to satisfy a broad range of functional requirements on the fly (col. 13, lines 40-45). Besides the CPU, the collective computational resources include VSP's. Tang teaches that VSP hardware (also referred to as wrapper-and-DSP-core) may include a logic wrapper around a DSP core (col. 5, line 5).

The Examiner appears to indicate, on page 4 of the Office Action (and referring to the passage starting at col. 11, line 65), that the VSP constitutes an additional driver means. The VSP's provide hardware assist functions to the CPU (col. 17, lines 50-67; col. 18, lines 50-60), but are not described by Tang as drivers. Moreover, it can be seen that the passage referenced by the Examiner in col. 111 describes the structure shown in FIGURE 8. Neither Figure 8 nor the associated description appearing in col. 111 teach or suggest that the hardware assist functions of the wrapper/DSP 820 (the "VSP") are in any way equivalent to a driver means or that the VSP is positioned between the operating system and the installed driver. As noted at col. 36, lines 10-18, a Direct DSP HAL ("VSP hardware Driver", see col. 47, lines 25-30), is positioned such that an ActiveDSP audio renderer filter passes streams through the VSP hardware driver to the VSP. In other words, even if for the sake of argument the VSP is treated as an additional driver means, the VSP or the VSP hardware drivers aren't positioned between the OS and the original driver. State differently, the communication between the operating system and the originally installed driver is not filtered through the new (or, in this case, additional) device driver, or with reference to claim 2, such that the communications pass through unchanged thus not affecting the original drivers enabling of the originally installed hardware. Instead, as best can be determined, the prior art system enables the previously unsupported hardware through use of an alternate device driver that operates independently of the original (preexisting) device driver. This setup is depicted in figure 125 of the prior art which shows a coupling of the alternate device drivers.

For the reasons cited above, applicants submit that the claims, as amended, are allowable since they describe structure that is distinguishable over the prior art. That is, Tang fails to teach or suggest all of the elements of claims 1, 8, and 9. Applicants further submit that the dependant claims are allowable at least due to their dependencies from an allowable base claim. The dependant claims have additional limitations distinguishable from the art of record. For example, claim 2 requires that the additional driver means is also configured to interface directly with the installed driver, thereby enabling continued and unchanged use of at least one hardware device of predetermined functionality, a feature not present in Tang as discussed above. In light of the above dependencies,

applicants submit that further arguments as to the dependant claims are not necessary at this time.

Conclusion

Accordingly, it is submitted that all issues in the Non Final Office Action have been addressed, and withdrawal of the rejections is respectfully requested. Applicants believe that this application is in condition for allowance, and respectfully request a prompt passage to issuance. If the Examiner believes that a telephone conference would expedite the prosecution of this application, he is invited to contact the Applicants' undersigned attorney at the telephone number set out below.

Applicants hereby petition for any necessary extensions of time for the filing of this paper under the provisions of 37 CFR 1.136. The director is hereby authorized to charge any appropriate fees under 37 CFR 1.17(a)(1) that may be required for a two month extension of time for the filing of this paper to Deposit Account No. 503302.

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Respectfully submitted,
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